

What is claimed is:

5 1. A vertical cavity surface emitting laser, comprising:
at least one quantum well having a depth of at least 40 meV and
comprised of InGaAs;
GaAsN barrier layers sandwiching said at least one quantum well; and
GaAsN confinement layers sandwiching said barrier layers.

10 2. The vertical cavity surface emitting laser of claim 1 wherein said
quantum well is up to and including 50 Å in thickness.

15 3. A vertical cavity surface emitting laser, comprising:
at least one quantum well having a depth of at least 40 meV and
comprised of InGaAs;
GaAsN barrier layers sandwiching said at least one quantum well; and
AlGaAs confinement layers sandwiching said barrier layers.

20 4. The vertical cavity surface emitting laser of claim 3 wherein said
quantum well is up to and including 50 Å in thickness.

25 5. A vertical cavity surface emitting laser, comprising:
at least one quantum well having a depth of at least 40 meV and
comprised of InGaAs;
AlGaAs barrier layers sandwiching said at least one quantum well;
and
GaAsN confinement layers sandwiching said barrier layers.

30 6. The vertical cavity surface emitting laser of claim 5 wherein said
quantum well is up to and including 50 Å in thickness.